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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,613	01/30/2004	Dwight M. Smith	27435.002	6773
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Constance Gall Rhebergen Bracewell & Patterson LLP P.O. Box 61389 Houston, TX 77208-1389				
			EXAMINER	
			ZHENG, LOIS L	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/768,613	SMITH, DWIGHT M.	
	Examiner	Art Unit	
	Lois Zheng	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. No claim amendments are made in view of applicant's response filed 1 October 2007. Therefore, claims 14-20 are currently under examination. Claims 1-13 and 21-33 remain withdrawn from consideration.

Status of Previous Rejections

2. The provisional rejection of claims 14-20 on the ground of nonstatutory obviousness-type double patenting is withdrawn in view of applicant's argument filed 1 October 2007.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14-15 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kalota et al. WO 98/08919(Kalota).

Kalota teaches applying a water soluble metal working fluid composition to metal surfaces as a lubricant(abstract). Kalota further teaches that the water soluble metal working fluid comprises group A and group B, wherein group B further comprises a salt mixture of monobasic and/or dibasic potassium and/or ammonium phosphate(page 19, lines 9-13). Kalota further teaches that the working fluid composition can be diluted with water before been fed to the metal substrate(page 21 lines 19-23, example 5).

Regarding claims 14-15 and 18-20, the water soluble metal working fluid as taught by Kalota has the same composition as the claimed phosphorous containing solution. The water in the metal working fluid of Kalota reads on the claimed carrier fluid. Since Kalota does not teach that the presence of zinc is mandatory, the examiner concludes that the water soluble metal working fluid of Kalota is substantially free of zinc as claimed. In addition, Kalota does not mention a highly exothermic reaction taking place during the mixing of the phosphate salts. The examiner concludes that the process of Kalota meets the limitation of the instant claims of not having a highly exothermic reaction. Furthermore, since the working fluid of Kalota is diluted with water, the water used for dilution as taught by Kalota reads on the claimed target fluid and the target fluid is a lubricating fluid as claimed based on the broadest reasonable interpretation. Lastly, since Kalota teaches a metal surface treatment process that is the same as the claimed process using the same processing solution, the examiner take a position that treating metal with this aqueous lubricant as taught by Kalota will also produce a phosphate metal layer on the metal surface as claimed.

Therefore, Kalota anticipates claims 14-15 and 18-20.

5. Claims 14 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP62-190297(JP'297).

JP'297 teaches a process of applying a water soluble lubricant to metal surfaces(abstract), wherein the water soluble lubricant comprises KH_2PO_4 and K_2HPO_4 dissolved in water(page 1 bottom right column – page 2 top left column). JP'97 further

teaches that the water soluble lubricant can be diluted with water(page 2 top left column) and the pH of the water soluble lubricant is 4-12(abstract).

Regarding claims 14 and 18-20, the water soluble lubricant as taught by JP'297 has the same composition as the claimed phosphorous containing solution. The water in the lubricant of JP'297 reads on the claimed carrier fluid. Since JP'297 does not teach that the presence of zinc and does not mention a highly exothermic reaction takes place during the mixing of the phosphate salts, the examiner concludes that the water soluble lubricant of JP'297 is substantially free of zinc and does not produce a highly exothermic reaction as claimed. Furthermore, since the water soluble lubricant of JP'297 is diluted with water, the water used for dilution as taught by JP'297 reads on the claimed target fluid and the target fluid is a lubricating fluid as claimed based on the broadest reasonable interpretation. Lastly, since a metal surface treatment process of JP'297 is the same as the claimed process using the same processing solution, the examiner take a position that the process of applying a water soluble lubricant as taught by JP'297 will also product a phosphate metal layer on the metal surface as claimed.

Therefore, JP'297 anticipates claims 14 and 18-20.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalota in view of Otaki et al. US 4,765,917(Otaki).

The teachings of Kalota are discussed in paragraph 4 above. However, Kalota does not explicitly teach the addition of claimed ammonium acetate.

Otaki teaches a water-base metal forming lubricant comprising additives such as organic phosphate(i.e. phosphate ester). Otaki further teaches the addition of ammonium acetate as performance enhancer in the water-base lubricant(col. 4 line 37).

Regarding claim 16, it would have been obvious to one of ordinary skill in the art to have incorporated ammonium acetate as taught by Otaki into the lubricating solution of Kalota in order to enhance the performance of the lubricating solution by aiding film formation, increasing temperature resistance and surface wetting or cooling as taught by Otaki(col. 4 lines 38-41).

Regarding claim 17, Kalota's examples further teaches a wide pH range of 6-10, which overlap the claimed pH range of about 6.0 to about 8.0. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed pH range from the disclosed range of Kalota in view of Otaki would have been obvious to one skilled in the art since Kalota in view of Otaki teach the same utilities in their disclosed pH range.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'297 in view of Kalota.

The teachings of JP'297 are discussed in paragraph 5 above. However, JP'297 does not explicitly teach the presence of $[\text{NR}_4]_2\text{HPO}_4$ in the solution.

The teachings of Kalota are discussed in paragraph 4 above. Kalota's teaching shows that monobasic, dibasic potassium and ammonium phosphates are functionally equivalent components in a water soluble lubricant solution.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated dibasic ammonium phosphate (i.e. $[\text{NH}_4]_2\text{HPO}_4$) into the monobasic and dibasic potassium phosphate containing lubricating solution of JP'297 with expected success since it is well settled that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See MPEP 2144.06.

9. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'297 in view of Kalota, and further in view of Otaki.

The teachings of JP'297 in view of Kalota are discussed in paragraph 8 above. However, JP'297 in view of Kalota do not explicitly teach the presence of ammonium acetate in the solution as claimed.

The teachings of Otaki are discussed in paragraph 5 above.

Regarding claims 16-17, it would have been obvious to have incorporated the ammonium acetate as taught by Otaki into the lubricant solution of JP'297 in view of Kalota for the same reasons as stated in paragraph 7 above.

Response to Arguments

10. Applicant's arguments filed 1 October 2007 have been fully considered but they are not persuasive.

In the remarks, applicant argues that Kalota does not teach process for forming a phosphate conversion coating on the metal surface but teaches lubrication of metal for metal working such as cutting and grinding. Applicant also argues that no conversion coating layer is produced as a result of Kalota's lubrication process.

The examiner concurs that the phosphate containing lubricating solution as taught by Kalota is a lubricant used on metal for metal working. However, its lubricating function does not conflict with its inherent ability to form a protective phosphate conversion coating layer on the metal surface. In paragraph [0018-0019] of the instant specification, the phosphate containing solution is used in a lubricating carrier fluid and applied to metal surfaces with the lubricant. Therefore, a phosphate containing lubricant not only has properties as a lubricant but also is capable of forming a protective phosphate coating on the metal surface. Since the process of applying a phosphate containing lubricating solution as taught by Kalota is the same as the claimed process as recited in claims 14-15 and 18-20 and uses same phosphate containing coating solution as claimed, it is the examiner's position that while lubricating the metal, the phosphate containing lubricating solution of Kalota also forms a

conversion phosphate metal coating layer absent any evidence data demonstrating that no phosphate conversion coating is formed after the application of the phosphating containing lubricating solution of Kalota.

Applicant further argues that JP'297 also does not teach process for forming a phosphate conversion coating on metal surfaces but teaches lubrication of metal for metal working. Applicant further argues that JP'297 includes a polyhydric alcohol as "an essential component" and this polyhydric alcohol is not present in the current invention.

For the same reasons as indicated above, the lubricating function of the phosphating containing lubricating solution of JP'297 does not conflict with its inherent ability to form a phosphate conversion coating. Since the process of applying a phosphate containing lubricating solution as taught by JP'297 is the same as the claimed process as recited in claims 14 and 18-20 and uses same phosphate containing coating solution as claimed, it is the examiner's position that while lubricating the metal, the phosphate containing lubricating solution of JP'297 also forms a conversion phosphate metal coating layer absent any evidence data demonstrating that no phosphate conversion coating is formed after the application of the phosphating containing lubricating solution of JP'297. In addition, the instant independent claim 14 uses open transitional phrase, which allows additional components to be present in the claimed phosphate containing solution, even if they are in significant amounts. See MPEP 2111.03 [R-3]. JP'297's phosphate containing solution comprises additional components such as polyhydric alcohol, which is not excluded by the open transitional phrase "comprising".

Applicant further argues that Otaki does not teach additives for forming phosphate conversion coating. Otaki teaches additives for metal forming lubricant. Combination of Kalota and Otaki also does not teach the formation of phosphate conversion coating layer.

The issue of forming a phosphate conversion coating layer by the phosphate containing lubricating solution of Kalota is discussed above. The combination of Kalota and Otaki is proper since they are both directed to lubricants for metal forming. Therefore, the examiner does not find applicant's argument persuasive.

Applicant's remaining arguments directed to the combination of JP'297 and Kalota and the combination of JP'297, Kalota and Otaki are also non-convincing since they based on the same arguments that the prior art teaches metal working lubricant and not formation of phosphate conversion coating. These arguments have been addressed as set forth above.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Howard US 5,234,676 teaches an aqueous composition containing aluminum nitride power and buffering agents comprising KH_2PO_4 , K_2HPO_4 , $(\text{NH}_4)_2\text{HPO}_4$ and ammonium acetate(col. 3 lines 11-27). However, Howard does not teach adding this aqueous composition to a target fluid to create a phosphate-metal layer on a metal surface.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ


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